

AMENDMENTS TO THE CLAIMS

1-8. (Canceled).

9. (Currently Amended) A polycrystalline silicon film on a buffer layer that is on a substrate, the polycrystalline film containing metal of which density ranges 2×10^{17} to 5×10^{19} atoms/cm³, and an electrical conductivity activation energy between 0.52eV and 0.71eV, the polycrystalline silicon film comprising a plurality of needle-shaped silicon crystallites,

wherein the polycrystalline silicon film is formed by crystallizing an amorphous silicon film containing the metal by a thermal treatment and applying an electric field with metal electrodes, and

wherein the needle-shaped silicon crystallites are formed by movement of a silicide of the metal.

10. (Previously Presented) The polycrystalline silicon film according to claim 9, wherein the metal includes one of nickel (Ni), gold (Au) and cobalt (Co).

11. (Previously Presented) The polycrystalline silicon film according to claim 9, wherein the metal works as a catalyst during the crystallization.

12-19. (Cancelled)